



FOOD FOR THE FUTURE



Think all potatoes look and taste alike? Think again. In many countries, people **depend on** a few **species** of “common” potatoes. But potatoes actually come in many different colors and shapes. In Peru and Bolivia, the people **grow** and have **preserved** so many types of potatoes that a whole diet can be built around them.



Before You Read

A. Matching. Look at the pictures and read the text above. Then match the words in **bold** to their definitions.

- | | |
|----------------|--|
| 1. depend on • | • a. to keep safe for future use |
| 2. species • | • b. to become bigger |
| 3. grow • | • c. type (usually of plant or animal) |
| 4. preserve • | • d. to put your trust in something |

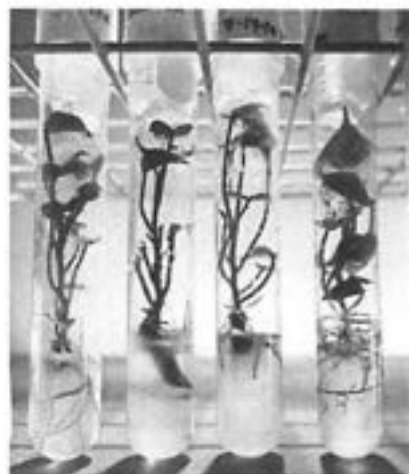
B. Predict. Look at the picture and captions on pages 14–15. Then read the first paragraph. What do you think the passage is about? Discuss your ideas with a partner. Then read the passage to check your ideas.

1 Food for the Future

In 1845, a deadly disease struck the farms of Ireland, killing all the Lumper potato plants. In another place or time, the death of a single **crop** species might not have been so important. But in Ireland, in 1845, people depended almost **solely** on the potato for food. The death of one species caused a terrible famine.¹ Now, some scientists are worried that such a famine could happen again—but on a much wider **scale**.

Over the centuries, farmers have discovered thousands of different species of food crops. Each species has special qualities. Some can be grown in very hot or cold climates. Others are not affected by certain diseases. However, you won't find many of these species in your local supermarket. To feed the seven billion people on Earth, most farmers today are growing only species of plants and farming only species of animals that are easy to produce in large numbers. Meanwhile, thousands of other species are becoming extinct.²

For example, in the Philippines, there were once thousands of **varieties** of rice; now fewer than 100 are grown there. In China, 90 percent of the wheat varieties grown just a century ago have disappeared. Experts believe that over the past century, we have allowed more than half of the world's food varieties to disappear.



At Heritage Farm's seed bank, rare and unique plants are carefully grown so the seeds can be preserved and shared.

- 1 A **famine** is a situation in which large numbers of people have little or no food.
- 2 If a species becomes **extinct**, it no longer exists.

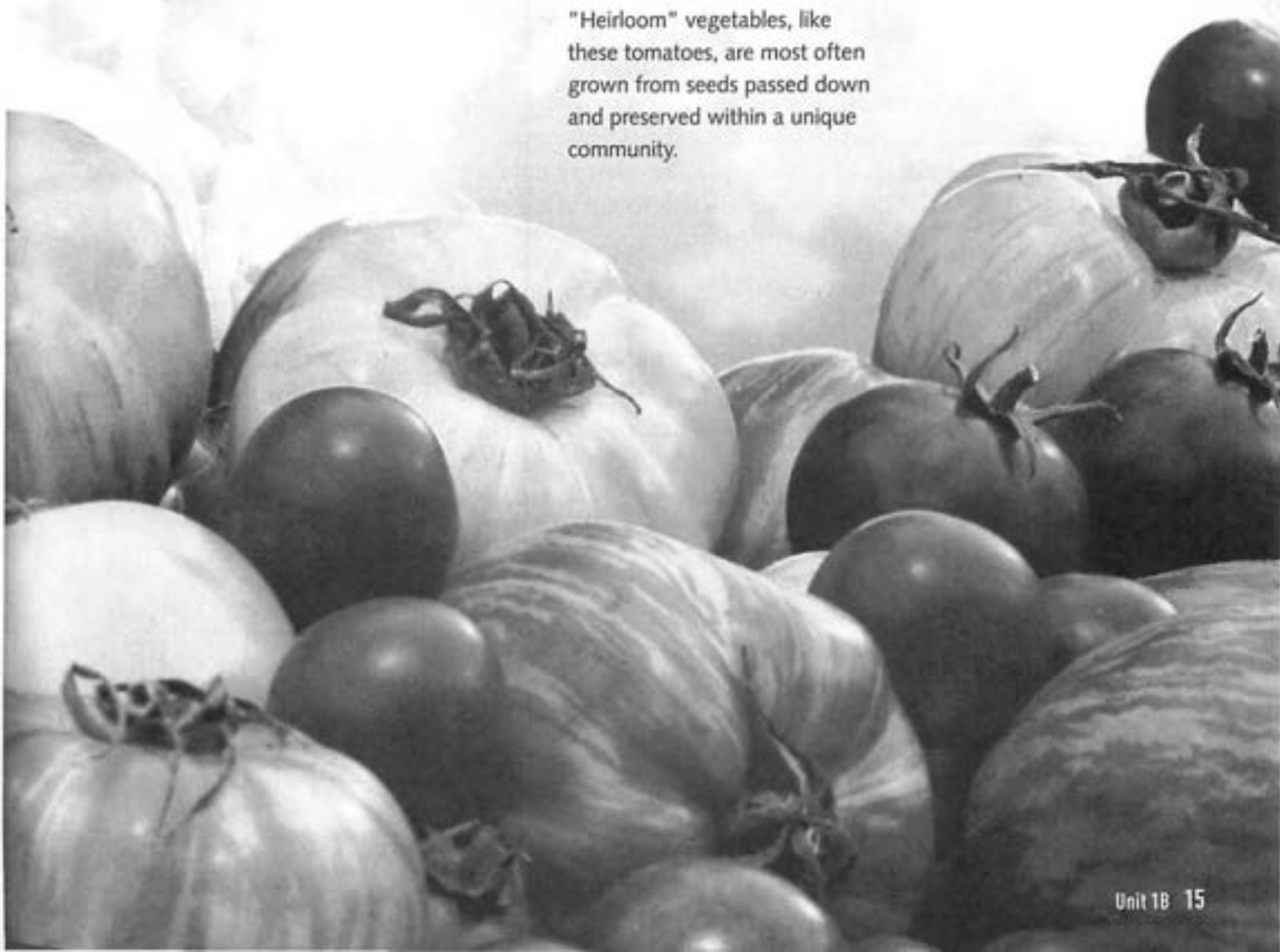
Saving the Seeds


25 One solution to this problem is to collect and preserve the **seeds** of as many different plant varieties as we can before they disappear. The idea was first **suggested** by Russian scientist Nikolay Vavilov. In the 1920s and '30s, he collected around 400,000 seeds from five **continents**. More recently, others are continuing the work he began.

30 In the U.S. state of Iowa, Diane Ott Whealy wanted to preserve **historic** plant varieties, like the seeds her great-grandfather brought to the U.S. from Germany more than a hundred years ago. She and her husband started a place called Heritage Farm, where people can store and trade seeds.

35 More importantly, the people at Heritage Farm don't just store the seeds; they plant them. By doing this, they are reintroducing foods into the **marketplace** that haven't been grown for years. These food species are not just special in terms of appearance or **flavor**. They also offer farmers food solutions for the future, from the past.

"Heirloom" vegetables, like these tomatoes, are most often grown from seeds passed down and preserved within a unique community.





Reading Comprehension

Multiple Choice. Choose the best answer for each question.

- | | |
|------------------|--|
| Gist | 1. What is this passage mainly about?
a. how food species disappear
b. the need to preserve different food species
c. what the food we eat will look like someday
d. ways to increase the number of food species |
| Cause and Effect | 2. What caused many people to die in Ireland in 1845?
a. The potatoes that people planted didn't grow.
b. People ate potatoes that were harmful to humans.
c. A disease killed their potato crop, so they had no food.
d. A deadly disease spread from the potato crop to humans. |
| Reference | 3. What does the word <i>others</i> refer to in line 11?
a. farmers
b. different climates
c. distinct qualities
d. species of food crops |
| Paraphrase | 4. Which sentence is closest in meaning to <i>you won't find many of these species in your local supermarket</i> (lines 12–13)?
a. Many of these species are too expensive.
b. Many of these species are not available to us.
c. Many of these species look like other species.
d. Many of these species are only found in big cities. |
| Detail | 5. Which of the following statements is NOT true?
a. Most farmers grow species that are easy to produce in small numbers.
b. Thousands of species of plants and animals have become extinct.
c. Fewer than 100 varieties of rice are grown in the Philippines.
d. Half of the world's food varieties have disappeared in the past 100 years. |
| Detail | 6. People have been preserving seeds to save crop species and varieties from extinction _____.
a. for thousands of years
b. for less than 100 years
c. since 1845
d. for only ten years |
| Inference | 7. Which statement would Diane Ott Whealy probably agree with?
a. The work started by Nikolay Vavilov was not important.
b. American seeds are better than German seeds.
c. It's important to store seeds, but you must also plant them.
d. Foods grown from older seeds are cheaper, but taste bad. |

Did You Know?

From the 307 varieties of corn sold 100 years ago, there are now only 12. Some, including this rare kind of wild corn, exist only in seed banks.



Identifying the Purpose of Paragraphs

Different paragraphs may perform different functions. Identifying their purpose can help you better understand the organization of a text. Some paragraphs may have more than one function. Common purposes include:

- to introduce a topic
- to present a conclusion
- to present an argument
- to summarize the key ideas
- to offer or describe a solution
- to offer another side of an issue
- to describe a situation or problem
- to report data as figures or statistics
- to provide background information
- to provide examples or explanations

A. Purpose. Look back at the passage on pages 14–15. Choose the purpose of each paragraph.

1. Paragraph 1

- a. to provide some historical background
- b. to summarize the key ideas

2. Paragraph 2

- a. to offer another side of the issue
- b. to describe a situation or problem

3. Paragraph 3

- a. to summarize some key ideas
- b. to report data as supporting evidence

4. Paragraph 4

- a. to offer another side of an issue
- b. to offer or describe a solution

5. Paragraph 5

- a. to present an argument
- b. to provide an additional example

6. Paragraph 6

- a. to report data as figures or statistics
- b. to present a concluding idea



Farmers today don't only preserve plants. They also protect farm animals, like this rare variety of chicken.

Critical Thinking Discuss with a partner. Do you think saving the world's varieties of foods is as important as saving animal species from extinction? Why or why not?

Vocabulary Practice

A. Completion. Circle the correct words to complete the information below.

Today, there are about 1,400 seed banks around the world. These keep seed **1. (varieties / flavors)** from all **2. (marketplaces / continents)** safe in the event of a large **3. (-scale / -historic)** global crisis, such as a famine. One of the largest seed banks lies inside a mountain on Norway's island of Spitsbergen, just 1,300 kilometers from the North Pole. This is a backup for all the world's other seed banks.

In 1996, director Cary Fowler commented that the seed bank's opening "marks a(n) **4. (solely / historic)** turning point in safeguarding the world's **5. (crop / flavor)** diversity." Billions of seeds are now kept there. They are stored in a permanently chilled, earthquake-free zone 120 meters above sea level. This should allow the seeds to remain high and dry, even if the polar ice caps melt.

B. Definitions. Match each word in **red** with its definition.

- | | |
|-----------------------------|---|
| 1. ____ crop | a. only |
| 2. ____ scale | b. how something tastes |
| 3. ____ seed | c. to put forward an idea |
| 4. ____ solely | d. important to the past |
| 5. ____ flavor | e. a range of different types |
| 6. ____ variety | f. a place of buying and selling |
| 7. ____ suggest | g. the size or extent of something |
| 8. ____ historic | h. part of a plant from which a new plant grows |
| 9. ____ continent | i. land consisting of countries (e.g., Asia) |
| 10. ____ marketplace | j. a plant grown in large amounts, like wheat |



Carved into the Arctic ice, the Svalbard Global Seed Vault holds "spare" copies of seeds held in other seed banks worldwide.

Word Link We can add **-ance** to some verbs to form nouns. Examples include *appearance, performance, attendance, acceptance, assistance, guidance, and ignorance.*